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10/716,093	11/18/2003	Michael C. Tulkoff	VIGN1660-1	4856

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EXAMINER

SAEED, USMAAN

ART UNIT	PAPER NUMBER
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2166

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/716,093

Applicant(s)

TULKOFF ET AL.

Examiner

Usmaan Saeed

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

1. Claims 1-49 are pending in this office action.

### ***Claim Objections***

2. Claims 8, 9, 20, 21, 32, 33, 44, and 45 are objected to because of the following informalities: These claims are objected to because they do not include period (.) at the end of each claim sentence. Appropriate correction is required.

### ***Drawings***

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Instance Objects 350. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be

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notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-49 are rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. The language of the claims raises a question as to whether the claims are directed merely to an environment or machine which would result in a practical application producing a concrete useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

Claims 1-49 are rejected because they are not producing concrete, useful, and tangible results.

Claims 13-24 and 37-48 are further rejected because they refer to a system and the system does not have any type of hardware i.e. memory or a processor for any functionality to be realized. As such, it is believed that the system of these claims is directed to non-statutory subject matter.

To expedite a complete examination of the instant application the claims rejected under U.S.C. 101 (nonstatutory) above are further rejected as set forth below in

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anticipation of application amending these claims to place them within the four categories of invention.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 8, 13-18, 20, 25-30, 32, 37-42, 44, and 49 are rejected under 35 U.S.C. 102(e) as being anticipated by **Macleod et al. (Macleod hereinafter)** (US PG Pub No. 2003/0105770).

With respect to claim 1, **Macleod teaches a method for integrating data into a content management system, comprising:**

**“generating a content type based on a set of data”** as a content class models a set of items that have similar properties and fulfill similar purposes. A content class defines the purpose or content of an item by containing as its elements a list of properties appropriate for that purpose or content (**Macleod Paragraph 0022**).

**“associating the set of data with the content type”** as schema definition require that objects conform to fixed data formats of classes defined in the directory schema. In other words, for example, if a class consists of ten (10) data elements, then any object that is based on that class will require the data storage to store those 10 data elements, regardless of whether each of the 10 elements even contain any data (**Macleod** Paragraph 0055).

Examiner interprets the content class as content type and the data associated to the class is based on the set of data (data with similar properties, which fulfill similar purposes and have fixed data formats).

Claims 13, 25, and 37 are same as claim 1 and are rejected for the same reason as applied hereinabove.

With respect to claim 2, **Macleod** teaches **“the method of claim 1, further comprising saving the content type”** as schema definition require that objects conform to fixed data formats of classes defined in the directory schema. In other words, for example, if a class consists of ten (10) data elements, then any object that is based on that class will require the data storage to store those 10 data elements, regardless of whether each of the 10 elements even contain any data (**Macleod** Paragraph 0055).

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Claims 14, 26, and 38 are same as claim 2 and are rejected for the same reason as applied hereinabove.

With respect to claim 3, **Macleod** teaches **“the method of claim 2, wherein generating the content type further comprises specifying attributes”** as a directory schema with object classes that have flexible attributes (**Macleod** Paragraph 0012).

Claims 15, 27, and 39 are same as claim 3 and are rejected for the same reason as applied hereinabove.

With respect to claim 4, **Macleod** teaches **the method of claim 2, further comprising**

**“instantiating a content instance object related to the content type”** as FIG. 6 shows an exemplary procedure 600 to change the operational or data providing nature of multiple object instances of a base content class in a directory schema independent of modifying the directory schema. At block 610, the procedure instantiates a first object instance of a flexible content class 422 (**Macleod** Paragraph 0074).

**“associating the content instance object with the set of data”** as the procedure assigns a first data string (e.g., XML) to a flexible attribute 418 in the first flexible object instance (block 610), the first data string defines any combination of a first operational and a data providing nature of the first object instance. Specifically, an

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application that has instantiated or that is using the first object instance knows of the first object instance's interface and how to unpack and use the first data string (**Macleod Paragraph 0075**).

Claims 16, 28, and 40 are same as claim 4 and are rejected for the same reason as applied hereinabove.

With respect to claim 5, **Macleod** teaches **“the method of claim 4, further comprising saving the content instance object”** as the combination of the attributeSyntax and oMSyntax properties determines the syntax of the attribute, that is, the type of data stored by instances of the attribute (**Macleod Paragraph 0043 & 0054**).

Claims 17, 29, and 41 are same as claim 5 and are rejected for the same reason as applied hereinabove.

With respect to claim 6, **Macleod** teaches, **“the method of claim 5, wherein the content instance object is instantiated and associated automatically”** as (**Macleod Paragraph 0074 & 0075**).

Claims 18, 30, and 42 are same as claim 6 and are rejected for the same reason as applied hereinabove.



With respect to claim 8, **Macleod teaches the method of claim 5, wherein a content instance object is instantiated for each datum** as FIG. 6 shows an exemplary procedure 600 to change the operational or data providing nature of multiple object instances of a base content class in a directory schema independent of modifying the directory schema. At block 610, the procedure instantiates a first object instance of a flexible content class 422. The procedure assigns a first data string (e.g., XML) to a flexible attribute 418 in the first flexible object instance (block 610), the first data string defines any combination of a first operational and a data providing nature of the first object instance. Specifically, an application that has instantiated or that is using the first object instance knows of the first object instance's interface and how to unpack and use the first data string. At block 614, independent of any modification to the directory schema 400, the procedure generates a second object instance of the same content class 422 that was used to create the first object instance (block 610) (**Macleod Paragraph 0074, 0075, 0076 and 0077**).

Claims 20, 32, and 44 are same as claim 8 and are rejected for the same reason as applied hereinabove.

With respect to claim 49, **Macleod teaches a method for integrating data into a content management system, comprising:**

**“generating a set of content types based on a set of data”** as a content class models a set of items that have similar properties and fulfill similar purposes. A content

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class defines the purpose or content of an item by containing as its elements a list of properties appropriate for that purpose or content (**Macleod** Paragraph 0022).

**“saving the set of content types”** Schema definition require that objects conform to fixed data formats of classes defined in the directory schema. In other words, for example, if a class consists of ten (10) data elements, then any object that is based on that class will require the data storage to store those 10 data elements, regardless of whether each of the 10 elements even contain any data (**Macleod** Paragraph 0055).

**“generating a set of content type objects corresponding to the set of content types”** as a content class models a set of items that have similar properties and fulfill similar purposes. A content class defines the purpose or content of an item by containing as its elements a list of properties appropriate for that purpose or content (**Macleod** Paragraph 0022). Schema definition require that objects conform to fixed data formats of classes defined in the directory schema. In other words, for example, if a class consists of ten (10) data elements, then any object that is based on that class will require the data storage to store those 10 data elements, regardless of whether each of the 10 elements even contain any data (**Macleod** Paragraph 0055).

**“generating a content instance object for each datum that fits a content type within the set of content types”** as FIG. 6 shows an exemplary procedure 600 to change the operational or data providing nature of multiple object instances of a base content class in a directory schema independent of modifying the directory schema. At

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block 610, the procedure instantiates a first object instance of a flexible content class 422 (**Macleod** Paragraph 0074).

**“associating the datum with the content instance object”** as the procedure assigns a first data string (e.g., XML) to a flexible attribute 418 in the first flexible object instance (block 610), the first data string defines any combination of a first operational and a data providing nature of the first object instance. Specifically, an application that has instantiated or that is using the first object instance knows of the first object instance's interface and how to unpack and use the first data string (**Macleod** Paragraph 0075).

**“saving the content instance object”** as the combination of the attributeSyntax and oMSyntax properties determines the syntax of the attribute, that is, the type of data stored by instances of the attribute (**Macleod** Paragraph 0043 & 0054).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9-12, 21-24, 33-36, and 45-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Macleod et al.** (US PG Pub No. 2003/0105770) as applied to claims 1-6, 8, 13-18, 20, 25-30, 32, 37-42, 44, and 49 above in view of **Varadarajan Thiruvillamalai**. (**Thiruvillamalai** hereinafter) (U.S. PG Pub No. 2004/0187100).

With respect to claim 9, **Macleod** does not explicitly teaches “**the method of claim 5, further comprising acquiring a key for the set of data.**”

However, **Thiruvillamalai** discloses “**the method of claim 5, further comprising acquiring a key for the set of data**” as a request to store an element having a data type and a key, the executing storage method code stores the element in a data store according to the key and in association with data type information (**Thiruvillamalai** Paragraph 0010).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of the cited references because **Thiruvillamalai's** teachings would have allowed **Macleod** to return an element referenced by a key, having a specified data type by acquiring a key for the set of data.

Claims 21, 33, and 45 are same as claim 9 and are rejected for the same reason as applied hereinabove.

With respect to claim 10, **Macleod** teaches “**the method of claim 9, wherein the key is acquired with a database query**” as allocated object elements in a database that are unused may become problematic and contribute to wasted data storage space and in some cases, decreased database query response times (**Macleod** Paragraph 0055).

**Macleod** teaches the elements of claim 10 as noted above but does not explicitly disclose, “**acquiring a key.**”

However, **Thiruvillamalai** discloses “**acquiring a key**” as a request to store an element having a data type and a key, the executing storage method code stores the element in a data store according to the key and in association with data type information (**Thiruvillamalai** Paragraph 0010).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of the cited references because **Thiruvillamalai's** teachings would have allowed **Macleod** to return an element referenced by a key, having a specified data type by acquiring a key for the set of data using a query.

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Claims 22, 34, and 46 are same as claim 10 and are rejected for the same reason as applied hereinabove.

With respect to claim 11, **Macleod** teaches “the method of claim 9, wherein the key is used to associate the content instance object with the set of data” as FIG. 6 shows an exemplary procedure 600 to change the operational or data providing nature of multiple object instances of a base content class in a directory schema independent of modifying the directory schema. At block 610, the procedure instantiates a first object instance of a flexible content class 422 (**Macleod** Paragraph 0074). The procedure assigns a first data string (e.g., XML) to a flexible attribute 418 in the first flexible object instance (block 610), the first data string defines any combination of a first operational and a data providing nature of the first object instance. Specifically, an application that has instantiated or that is using the first object instance knows of the first object instance's interface and how to unpack and use the first data string (**Macleod** Paragraph 0075).

**Macleod** teaches the elements of claim 10 as noted above but does not explicitly disclose “use of a key.”

However, **Thiruvillamalai** discloses “use of a key” as a request to store an element having a data type and a key, the executing storage method code stores the element in a data store according to the key and in association with data type information (**Thiruvillamalai** Paragraph 0010).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of the cited references because **Thiruvillamalai's** teachings would have allowed **Macleod** to return an element referenced by a key, having a specified data type by acquiring a key for the set of data and associating it with the content instance objects.

Claims 23, 35, and 47 are same as claim 11 and are rejected for the same reason as applied hereinabove.

With respect to claim 12, **Macleod** teaches “**the method of claim 11, further comprising managing the set of data using the content instance object**” as an application that has instantiated or that is using the first object instance knows of the first object instance's interface and how to unpack and use the first data string (**Macleod** Paragraph 0075). The application using the second object instance knows of the second object instance's interface and how to unpack and use the second data string (**Macleod** Paragraph 0076). The directory service manages and maintains a distributed directory that is based on the directory schema 400 with flexible attributes (**Macleod** Paragraph 0072).

Claims 24, 36, and 48 are same as claim 12 and are rejected for the same reason as applied hereinabove.

7. Claims 7, 19, 31, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Macleod et al.** (US PG Pub No. 2003/0105770).

With respect to claim 7, **Macleod** teaches “**the method of claim 5, wherein the content type and the content instance object are saved in a first database and the data is saved in a second database**” as the combination of the attributeSyntax and oMSyntax properties determines the syntax of the attribute, that is, the type of data stored by instances of the attribute (**Macleod** Paragraph 0043 & 0054). Schema definition requires that objects conform to fixed data formats of classes defined in the directory schema. In other words, for example, if a class consists of ten (10) data elements, then any object that is based on that class will require the data storage to store those 10 data elements, regardless of whether each of the 10 elements even contain any data (**Macleod** Paragraph 0055).

**Macleod** teaches elements of claim 7, but does not explicitly teach, “**content type and the content instance object are saved in a first database and the data is saved in a second database.**”

However, **Macleod** teaches, “**content type and the content instance object are saved in a first database and the data is saved in a second database**” as one or more databases coupled together (**Macleod** Paragraph 0067). Databases 506 include, for example, directories of enterprise users, resources, financial information, corporate e-mail systems, network operating systems, and the like. A database is an unstructured or structured data store such as object-oriented database such as an XML



database, a Hypertext Markup Language (HTML) database, an SQL server database, and/or the like (**Macleod** Paragraph 0069).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited reference because these teachings would have allowed to manage and maintain distributed directories/databases that are based on the directory schema 400 with flexible attributes (**Macleod** Paragraph 0072).

Claims 19, 31, and 43 are same as claim 7 and are rejected for the same reason as applied hereinabove.

### ***Conclusion***

8. The prior art made of record and not replied upon is considered pertinent to applicant's disclosure is listed on 892 form.

### ***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usmaan Saeed whose telephone number is (571)272-4046. The examiner can normally be reached on M-F 8-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571)272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Usmaan Saeed  
Patent Examiner  
Art Unit: 2166



Leslie Wong  
Primary Examiner

US  
April 25, 2006